



Marc Stifelman

11/01/2001 04:00 PM

To: Marykay Voytilla/R10/USEPA/US@EPA

cc: Cami Grandinetti/R10/USEPA/US@EPA, sheldrake.sean@epa.gov,
Sharon_Quiring@urscorp.com

Subject: Bunker Mine Water

Please replace the previous version with this one. I had omitted a reference.



thanks, ZincResponse.doc

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 Marc Stifelman, Environmental Toxicologist  
 US Environmental Protection Agency, Region 10  
 Office of Environmental Assessment, Risk Evaluation Unit  
 1200 Sixth Avenue, Mail Stop: OEA-095  
 Seattle, Washington 98101  
 Tele 206/553-6979  
 Facs 206/553-0119  
 stifelman.marc@epa.gov

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Marc Stifelman

11/01/2001 03:26 PM

To: Marykay Voytilla/R10/USEPA/US@EPA

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Sharon\_Quiring@urscorp.com

Subject: Bunker Mine Water

Marykay,

I've attached a draft response to the comment on zinc. I've also included similar language regarding silver and levels of lead and arsenic sampled on Spokane Tribe beaches as part of our FSP-15 sampling effort. The other draft responses looked good.

Let me know if you have questions on my draft.

-Marc

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 stifelman.marc@epa.gov

USEPA SF



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Draft response to comment 10.3:

Why cleanup things that people pay for as supplements (i.e. zinc)?

Although many minerals are required to maintain adequate nutrition and good health, excessive or insufficient quantities can be unhealthy to people. Recommended dietary levels of vitamins and minerals have been developed by the National Research Council and these values appear on food and supplement labels. For zinc, the safe amount released to the South Fork Coeur d'Alene River will be lower for aquatic life than for people. The recommended safe level or reference dose for zinc is 0.3 mg/kg*day (22.5 mg for a 75 kg adult). This level is based on adverse health effects, impaired enzyme function, in a clinical study of women given 50 mg of zinc supplements per day. Depending upon the amount of exposure to mine water, safe levels of zinc could be exceeded by untreated zinc discharges which range from 60 to 700 mg/liter.

Additionally, colloidal silver suspensions marketed as health tonics are potentially toxic and health benefits have not been demonstrated. The reference dose for silver is .005 mg/kg*day based on skin discoloration (argyrosis) in adults receiving silver medication in 1935. Since that time, medicinal use of silver has been replaced with safer and more effective antibiotics. Depending upon the amount of exposure to mine water, safe levels of silver could be exceeded by untreated silver discharges which range from .002 to .05 mg/liter.

Regarding metals levels near the Spokane Tribe of Indians Reservation and concerns raised by the Spokane Tribe:

The Spokane Tribe identified nine beach locations along the Lake Roosevelt arm of the Spokane River which were sampled by EPA in 1999. In these locations, levels of lead and arsenic did not differ significantly from anticipated natural levels of these metals. The highest levels for lead and arsenic were 20 and 16 mg/kg, respectively. As part of the Model Toxics Control Act, the Washington Department of Ecology has established natural background levels for lead and arsenic in the Spokane Area of 16 and 10, respectively. In the Silver Valley, 90th percentile natural levels of lead and arsenic are 170 and 22, respectively.